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HW#72H: Complex Perimeter & Area

Due: Monday, March 23rd

Honors Geometry

**Failure to show all work and will result in LaSalle!**

**INCLUDE UNITS IN ALL FINAL ANSWERS.**

|  |  |
| --- | --- |
| 1) Karen is buying a wallpaper border for her bedroom, which is 12 ft by 13 ft. If the border is sold in rolls of 5 yards each, how many rolls will she need to purchase? | 2) The diameter of a circle and the hypotenuse of a 30-60-90 triangle have the same length. What is the circumference of the circle if the length of the long leg is 6 inches?  Exact answer:  Approximate answer: |
| 3) An astronaut is driving along the edge of a round crater in his space pod. The crater’s diameter is 14 kilometers. In one revolution around the crater, how far does the pod travel? | 4) The hypotenuse of an isosceles right triangle has the same length as one side of a square. The legs of the isosceles right triangle are each 5 meters. What is the area of the square? |
| 5) An 8-foot-by-4-foot garden space is increased by 3 times. If the 8-foot side is increased by 4 feet, how many feet must the 4-foot side have been increased? | 6) The circumference of a circle and the perimeter of an equilateral triangle are the same. If the diameter of the circle is 10 cm, what is the length of the side of the triangle?  Exact answer:  Approximate answer: |
| 7) If the area of a small pizza is 78.5 in2, what size pizza box would best fit the small pizza? (Note: Pizza boxes are measured according to the length of one side.) | 8) Stuckeyburg is a small town in rural America. Use the map to approximate the area of the town.  Geometry |
| 9) A circular print is being matted in a square frame. If the frame is 18 in by 18 in, and the radius of the print is 7 in, what is the area of the matting? **Round to the nearest hundredth.** | 10) Pat is making a Christmas tree skirt. She needs to know how much fabric to buy. Using the illustration provided, determine the area of the skirt to the nearest foot.  Geometry |

11) A piece of wire 120 cm in length is to be cut into two pieces, one to form a rectangle and the other an equilateral triangle. The length of the rectangle is to be three less than twice the width, and each side of the triangle is to be twice the length of the rectangle. Find the length of each piece of wire.

a. Draw a figure.

b. Write an equation to represent the rectangle’s **length.**

c. Write an equation to represent the sides of the triangle.

d. What is the length of each piece of wire? **\*Hint: Use the perimeter equation for a rectangle!\***